

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A voltage regulator for controlling an output voltage of an alternator having an armature winding, a field winding and a power supply line, comprising:

a switch means connected in series to the field winding for on/off-control of a field current fed to the field winding;

a flywheel circuit connected in parallel with the field winding for flywheeling the field current to the field winding when the switch means is turned off;

a failure detecting means for comparing the output voltage with a threshold and detecting a failure in the power supply line connected to an output terminal of the alternator when the output voltage exceeds the threshold; and

a generation control means for controlling, upon detection of the failure in the power supply line, power generation of the alternator for a predetermined time that is longer than a time constant of the field winding to suppress the power generation which tends to cause a repetition of high voltage generation.

2. (Original) The voltage regulator as in claim 1, wherein the generation control means drives the switch means with a predetermined conductive rate that is smaller than that of the switch means when the failure in the power supply line is detected.

3. (Original) The voltage regulator as in claim 1, wherein the generation control means drives the switch means to maintain the output voltage of the alternator to a predetermined voltage that is smaller than a terminal voltage of an on-board battery.

4. (Original) The voltage regulator as in claim 1, wherein the generation control means fully turns off the switch means.

5. (Original) The voltage regulator as in claim 1, further comprising:
a rectifier constructed with a Zener diode having a reverse breakdown characteristic,
wherein the failure detecting means detects an output voltage of the armature winding or a DC output voltage of the rectifier, and determines the failure when the detected voltage is larger than a regulated value of the output voltage of the alternator and exceeds a predetermined voltage that is smaller than a reverse breakdown voltage of the Zener diode and continues another predetermined time that is shorter than the time constant of the field winding.

6. (Original) The voltage regulator as in claim 1, further comprising:
an alarm means for issuing an alarm upon detection of the failure in the power supply line.

7-12. (Canceled).

13. (New) A voltage regulator for controlling an output voltage of an alternator having an armature winding, a field winding and a power supply line, comprising:

a switch means connected in series to the field winding for on/off-control of a field current fed to the field winding;

a flywheel circuit connected in parallel with the field winding for flywheeling the field current to the field winding when the switch means is turned off;

a failure detecting means for detecting a failure in the power supply line connected to an output terminal of the alternator; and

a generation control means for controlling, upon detection of the failure in the power supply line, power generation of the alternator for a predetermined time that is longer than a time constant of the field winding to suppress the power generation,

wherein the generation control means drives the switch means with a predetermined conductive rate that is smaller than that of the switch means when the failure in the power supply line is detected.

14. (New) The voltage regulator as in claim 1, wherein the generation control means controls the power generation when the failure detecting means detects the failure a plurality of times.